NEBRASKA ADMINISTRATIVE CODE

TITLE 36 - NEBRASKA DEPARTMENT OF AGRICULTURE, DIVISION OF LABORATORIES

Chapter 1 - THE NEBRASKA SOIL AND PLANT ANALYSIS LABORATORY ACT REGULATIONS

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AMENDED RULE

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LAST DATE AMENDED: June 9, 1992

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001 Minimum Standards.

<u>001.01</u> Laboratory Facilities and Equipment. Each laboratory which performs soil and plant analysis shall maintain equipment and facilities which are adequate and appropriate for the services offered. Each laboratory shall also maintain the following standards:

 $\underline{001.01A}$ A written plan of quality assurance shall be developed and followed, and shall include, but not be limited to, the following elements:

 $\underline{001.01A1}$ Organization and responsibilities of personnel.

<u>001.01A1a</u> Qualifications of laboratory supervisor.

001.01A1b Staff training procedures.

001.01A1b(1) Laboratory standard
operating procedures and quality

assurance.

001.01A1b(2) Test methods training.

<u>001.01A1b(3)</u> Proficiency assessment.

<u>001.01A1b(4)</u> Safety.

001.01A2 Laboratory equipment and inventory.

001.01A2a Manufacturer, model, and age.

001.01A2b Frequency of calibrations.

<u>001.01A2c</u> Routine preventative maintenance schedules.

 $\underline{001.01\text{A2d}}$ Written record of calibrations and repairs.

001.01A3 Sample handling.

<u>001.01A3a</u> Assignment of unique sample number.

001.01A3b Sample logging procedures.

001.01A3c Sample custody.

001.01A3d Record custody.

001.01A4 Analytical methods.

<u>001.01A4a</u> Listing of department approved methods used.

001.01A4b Listing of other methods used.

<u>001.01A4c</u> Protocol for in-house validation of methods.

<u>001.01A5</u> Analytical standards and other reagents.

001.01A5a Sources of purchased standards.

<u>001.01A5b</u> Use of appropriate standard material.

 $\underline{001.01A5c}$ Adherence to standard expiration date.

 $\underline{001.01A5d}$ Use of appropriate grade of other reagents.

<u>001.01A5e</u> Written documentation of reagent preparation.

001.01A6 Laboratory glassware.

<u>001.01A6a</u> Accuracy appropriate for the intended use.

<u>001.01A6b</u> Cleaning procedure to avoid contamination.

001.01A7 Quality Control.

 $\underline{001.01A7a}$ Number of controls and frequency of use.

<u>001.01A7b</u> Use of standard curves or other calibration methods.

<u>001.01A7c</u> Use of control and warning limits.

<u>001.01A7d</u> Corrective action employed for system control.

- <u>001.01A7e</u> Documentation.
- 001.01A7f Control data review.
- 001.01A7g Data custody.
- <u>001.01A7h</u> Participation in interlaboratory proficiency testing program.
- <u>001.01B</u> Ample work bench space shall be provided, which shall be properly lighted and convenient to sink water and electrical outlets as necessary.
- <u>001.01C</u> Records of the activities shall be readily accessible and made available to the department upon request.
- <u>001.02</u> Personnel. Each laboratory shall be supervised by a person who is responsible for the training and supervision of their staff to sufficiently accomplish the requirements of the Nebraska Soil and Plant Analysis Laboratory Act and this regulation. Such person shall, as a condition precedent, meet one of the following qualifications:
 - <u>001.02A</u> They shall be a graduate of an accredited college with a bachelor of science degree and a major in one of the chemical, engineering, physical or biological sciences; or
 - <u>001.02B</u> They shall be a graduate of an accredited college with a bachelor of science degree and a minimum of twenty credit hours or the equivalence thereof in chemistry or soil science; or
 - $\underline{001.02C}$ They shall have five years prior experience in the supervision of a laboratory which performs soil and plant analysis, and shall be approved by the Director.
- $\underline{002}$ Standard Reporting Units. Analytical results shall be reported in elemental form as parts per million, except as

follows:

- <u>002.01</u> Either parts per million or percent may be used for results above one thousand parts per million.
- $\underline{002.02}$ The negative log value from direct instrument reading shall be used for pH values.
- <u>002.03</u> Other methods of reporting may be used for analysis when reporting as parts per million is not applicable. Examples of such situations are soluble salts, particle size analysis, and level of excess lime.
- <u>003</u> Report formats. The name of the test performed and the method used for that test shall be stated specifically.
 - <u>003.01</u> When the test is performed in adherence to published and accepted soil method references, the label will state the test and method. Example: Zinc by DTPA extraction. The method must be identified by the same method name, and all conditions must be followed as published.
 - <u>003.02</u> When the test is performed in a manner other than as stated in 003.01 above, the label will state the test and indicate the method as "other", or by a designation selected by that particular laboratory. The selected designation shall not be as stated in 003.01. Method modifications must be supported by in house validation, as in 001.01A4c.
- <u>004</u> <u>Annotation.</u> <u>Neb. Rev. Stat. §§2-3101 to 2-3110 (Reissue 1991, Cum. Supp., 1994 and Supp. 1995.</u>